Material Safety Data Sheet

Product Name: Northern Tank Cleaner
A ready-to-use liquid cleaner / degreaser.

Northern Factory Sales
1950 Trott Ave SW
Willmar, MN 56201

24 Hour EMERGENCY ONLY phone: 1-800-255-3924
Information phone: 1-800-328-8900 or 320-235-2288
Fax: 320-235-2297

Section 2 - Composition / Information on Hazardous Ingredients
Contains no hazardous ingredients as defined in CFR 29.1910.1200.

Section 3 - Hazards Identification
Emergency Overview: Liquid is very irritating to the eyes, moderately irritating to the skin. Product is non-flammable, water based and presents little hazard in a fire. A yellow-green liquid with a sharp odor.

Health Hazards: Irritant

Primary Routes of Entry: Through Skin Inhalation Ingestion

Physical Hazards: None

Potential Health Effects:
Eyes - causes irritation, redness, tearing. May cause damage if not rinsed out quickly.
Skin - causes irritation, reddening, drying and possibly dermatitis on persons with sensitive skin.
Swallowing - causes irritation, may cause damage to mucous membranes.
Breathing - Excessive inhalation of fumes may cause respiratory irritation.

Section 4 - First Aid Measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention immediately.

Skin Contact: For brief contact with small amounts wash the exposed area with soap and water. For larger amounts or if not washed off soon after contact flush the exposed skin with running water for 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before wearing again. If irritation persists, get medical attention.

Inhalation: If affected, move the affected person to fresh air. If irritation persists get medical attention.

Ingestion: If the product is swallowed, do NOT induce vomiting. If the affected person is conscious, give a glass of water or milk to drink. Get medical attention.

Section 5 - Fire-Fighting Measures

Flash Point: none. (ASTM D-56 closed cup)
Lower Explosive Limit: Not Applicable
Upper Explosive Limit: Not Applicable
Extinguishing Media: Any
Special Fire Fighting Procedures: None.
Unusual Fire And Explosion Hazards: None.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wipe or mop up small spills.

Section 7 - Handling and Storage

Store at temperatures between 40° and 100° F.

Empty containers retain product residue and may be hazardous. Observe all precautions given in this data sheet.
Section 8 - Exposure Controls / Personal Protection

Contains no hazardous ingredients as defined in CFR 29 1910.1200.

Ventilation: None when used as directed.
Respiratory Protection: None.
Gloves: Wear rubber or latex gloves. Disposable latex is acceptable.
Eye Protection: Wear safety glasses with side shields.
Other Protective Equipment: None.

Section 9 - Physical and Chemical Properties

Boiling Point: 213° F.
Specific Gravity: 1.05
Percent Volatiles: 92%
Solubility In Water: Complete
Appearance and Odor: Yellow-green liquid with sharp odor.
Vapor Pressure: Not Available
Vapor Density: Not Available
Evaporation Rate: Same as water.
P: 11.9 ± 0.5

Section 10 - Stability and Reactivity

Incompatibility: None
Hazardous Decomposition Products: None

Section 11 - Toxicological Information

LD₅₀: 50,000 mg/kg
Target Organs: None.

Section 12 - Ecological Information

Not toxic, but do not dispose of in the environment.

Section 13 - Disposal Considerations

Waste Disposal Method: Wash to a sanitary sewer with a large amount of water.

Section 14 - Transport Information

D.O.T. Hazard Class: Not considered hazardous by D.O.T., I.M.C.O., I.A.T.A. or U.N.

Section 15 - Regulatory Information

The components of this product are on the TSCA inventory of chemical substances.

Section 16 - Other Information

NFPA: H:1 F:0 I:0
HMIS® III: H:2 F:0 P:0
These ratings estimates are to be used only with a fully implemented training program in the workplace. NFPA® is a mark registered by the NFPA. HMIS® is a mark registered by the NPCA.

First issue sheet.

The information accumulated herein is believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.
Material Safety Data Sheet

Product Name: Acetone
A hydrocarbon solvent.

Northern Factory Sales, Inc.
2701 4th Ave SW
Willmar, MN 56201

24 hour Emergency Only phone: 1-800-255-3924
Information phone: 1-800-328-8900 or 320-235-2288
fax: 320-235-2297

Section 2 - Composition / Information on Hazardous Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Percent (w/w)</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>99 - 100%</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview: DANGER! Extremely flammable liquid and vapor. Heavy vapors may travel a considerable distance and ignite a flash fire. Harmful or fatal if swallowed. Harmful if inhaled or absorbed through skin. Affects central nervous system. Causes irritation to skin, eyes and respiratory tract. It may be extinguished by CO₂, dry chemical or foam. Sensitive to static discharge. A clear, colorless liquid with a strong solvent odor.

Health Hazards: Irritant, Affects CNS
Physical Hazards: Flammable

Primary Routes of Entry: X Through Skin   X Inhalation   X Ingestion

Potential Health Effects:
Eyes - Vapors are irritating to the eyes. Splashes may cause severe irritation, stinging, tearing, redness and pain.
Skin - Causes irritation to skin. Symptoms include redness, pain, drying and cracking of the skin. Prolonged skin contact may defat the skin and produce dermatitis.
Swallowing - Swallowing small amounts is not likely to produce harmful effects. Larger amounts may produce abdominal pain, nausea and vomiting. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms expected to parallel inhalation.
Inhalation - Excessive breathing of vapors causes nasal and respiratory irritation, coughing, dizziness, dullest and headache. High concentrations may cause CNS depression, narcosis and unconsciousness.

Aggravation of Pre-existing Conditions: Use of alcoholic beverages enhances toxic effects.

Section 4 - First Aid Measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention immediately.

Skin Contact: Minor contact, wash the exposed area with soap and water. Greater contact, remove contaminated clothing and shoes and rinse the exposed area thoroughly with water for at least 15 minutes. If irritation persists, get medical attention. Wash contaminated clothing and clean contaminated shoes before wearing again.

Inhalation: If affected, move the affected person to fresh air. If irritation persists get medical attention. If breathing has stopped, give artificial respiration and get medical attention immediately.

Ingestion: If the product is swallowed, vomiting may occur spontaneously, but DO NOT INDUCE VOMITING. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5 - Fire-Fighting Measures

Lower Explosive Limit: 2.5%  Upper Explosive Limit: 12.8%
Extinguishing Media: Dry chemical, alcohol foam or carbon dioxide. Water may be ineffective.
Special Fire Fighting Procedures: None.
Unusual Fire And Explosion Hazards: Danger! Extremely flammable. Heavy vapors can flow long distances and be ignited by pilot lights, sparks, heaters, smoking, electric motors, or static discharge, and flash back. Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. This material may produce a floating fire hazard. Sensitive to static discharge.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources and use a respirator if the spill is large. Ventilate area of leak or spill. Dike to prevent entry into drains, sewers, streams and other bodies of water. Small spills may be wiped up. Larger spills can be collected into metal containers for disposal or absorbed onto oil dry or vermiculite. Rags and absorbent material are very flammable until the solvent has evaporated. Use caution to prevent static discharges. Large spills must be reported according to CERCLA regulations.
**Section 7 - Handling and Storage**

Do not use, pour, spill or store near heat, sparks, heating elements or open flame. Vapors could be ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at a considerable distance from the source.

When pouring or transferring, ground the container being poured into and bond from the product can to the container or tank being poured into with wires and alligator clips.

Empty containers may retain product residue. Observe all hazard precautions given in this data sheet.

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**Section 8 - Exposure Controls / Personal Protection**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>Percent (w/w)</th>
<th>TWA(source)</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>99-100%</td>
<td>1000ppm(1), 250ppm(2), 500ppm(3), 750ppm(4)</td>
<td>750ppm(3), 1000ppm(4)</td>
<td></td>
</tr>
</tbody>
</table>

(1)=OSHA  (2)=NIOSH  (3)=ACGIH  (4)=CANADA  TWA=8 hr Time Weighted Average  STEL=15 minute TWA  Ceiling=Instantaneous

**Ventilation:** At least 10 air changes per hour for good general room ventilation are recommended. If the exposure limits will be exceeded, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the limits. Ventilation must be explosion-proof.

**Respiratory Protection:** If the exposure limits above will be exceeded wear a NIOSH approved respirator with an organic vapor cartridge or SCBA.

**Gloves:** If the product will contact hands wear resistant gloves such as butyl rubber or Nitrile. Do not use latex gloves. Nitrile disposable gloves are good.

**Eye Protection:** If splashing is possible wear safety glasses with side shields or chemical goggles. Maintain eye wash and quick-drench facilities in the work area.

**Other Protective Equipment:** Wear protective clothing as appropriate for the exposure potential.

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**Section 9 - Physical and Chemical Properties**

- **Boiling Point:** 133° F.
- **Specific Gravity:** 0.79
- **Percent Volatiles:** 100%
- **Solubility In Water:** Soluble
- **Appearance and Odor:** A clear, colorless liquid with a strong solvent odor.
- **Odor Threshold:** 62 ppm
- **Vapor Pressure:** 400mm Hg
- **Vapor Density:** 2.0 (Air = 1)
- **Evaporation Rate:** 7.7 (Butyl Acetate = 1).
- **pH:** Not Applicable

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**Section 10 - Stability and Reactivity**

**Incompatibility:** Oxidizing materials, caustics, alkalis, chlorine compounds, acids. Can attack many plastics, resins and rubber.

**Hazardous Decomposition Products:** CO₂, CO when heated to decomposition.

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**Section 11 - Toxicological Information**

- **Acetone**
  - LD₅₀: 5.8 g/kg rat oral
  - LC₅₀: 50 mg/m³/8Hr rat inhalation
  - IDLH: 2,500 ppm

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**Section 12 - Ecological Information**

Do not dispose of in the environment. Not expected to be toxic to aquatic life. LC50/96-hour for fish > 100 mg/l.

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**Section 13 - Disposal Considerations**

**Waste Disposal Method:** Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

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**Section 14 - Transport Information**

D.O.T. Hazard Class: Gallons and larger - ACETONE, 3, UN 1090, P.G. II. Quarts and smaller - ORM-D.

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**Section 15 - Regulatory Information**

The components of this product are on the TSCA inventory of chemical substances.

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**Section 16 - Other Information**

**NFPA:** H:2  F:3  I:0  **HMIS® III:** H:2  F:3  P:0  These ratings estimates are to be used only with a fully implemented training program in the workplace. NFPA® is a mark registered by the NFPA. HMIS® is a mark registered by the NPCA.

The information accumulated herein is believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.
Material Safety Data Sheet

Product Name: Northern Fuel Tank Liner
A liquid fuel tank liner.

Northern Factory, Inc.
1950 Trott Avenue SW
Wilmar, MN 56201

24 hour Emergency Only phone: 1-800-255-3924
Information phone: 1-800-328-8900 or 320-235-2288
Fax: 320-235-2297

Section 2 - Composition / Information on Hazardous Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Percent (w/w)</th>
<th>Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butanone</td>
<td>78-93-3</td>
<td>60 - 100%</td>
<td>No</td>
</tr>
<tr>
<td>1,2 Butylene Oxide</td>
<td>106-88-7</td>
<td>1 - 5%</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview: Liquid is moderately irritating to the eyes and mildly irritating to the skin. Flammable concentrations of vapors in air are possible, may travel considerable distance and may flash back to the container. Vapors are heavier than air, but the low vapor pressure and evaporation rate make flammable mixtures in the air unlikely. It may be extinguished by CO₂, dry chemical or foam. A clear, blue, viscous liquid with a solvent odor.

Health Hazards: Eye Iritant, Possible Skin Irritant

Primary Routes of Entry: X Through Skin X Inhalation X Ingestion

Potential Health Effects:

Eye - liquid causes irritation, redness and blurred vision. Sticks to eyes, lids and lashes.

Skin - Prolonged or repeated contact may cause defatting and drying, which may result in skin irritation or dermatitis.


Breathing - excessive breathing of vapors may cause nasal and respiratory irritation, dizziness, headache, and nausea. High concentrations may cause CNS depression.

Section 4 - First Aid Measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention immediately.

Skin Contact: Wipe off wet material with a paper towel or rag. If dry, it will often peel or rub off. If not, use M.E.K., acetone or lacquer thinner to remove it. Thoroughly wash the exposed area with soap and water. Wash the exposed skin with soap and water. Remove contaminated clothing and shoes. Will not wash out of clothing. If irritation develops and persists, get medical attention.

Inhalation: If affected, move the affected person to fresh air. If irritation persists get medical attention. If breathing has stopped, give artificial respiration and get medical attention immediately.

Ingestion: Get medical attention. If the product is swallowed, do NOT induce vomiting. Product may block the airway. Get medical attention immediately.

Section 5 - Fire-Fighting Measures

Flash Point: 21° F. /-6° C. (ASTM D-56 closed cup) Autoignition Temp.: 885°F / 474° C.

Lower Explosive Limit: 1.74% @ 200°F Upper Explosive Limit: 11.4% @ 200°F

Extinguishing Media: Water, carbon dioxide, dry chemical, alcohol foam.

Special Fire Fighting Procedures: None.

Unusual Fire And Explosion Hazards: None

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources and use a respirator if the spill is large. Dike to prevent entry into drains, sewers, streams and other bodies of water. If wet, small spills may be wiped up. When the material is tacky it may be shoveled or scraped up. Clean-up residue with a solvent such as MEK or acetone. Larger spills can be scooped into metal containers for disposal or absorbed onto oil dry or vermiculite. Rags and absorbent material are very flammable until the solvent has evaporated.

Section 7 - Handling and Storage

Do not use, pour, spill or store near heat, sparks, heating elements or open flame. Vapors could be ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at a considerable distance from the source.

When pouring or transferring, ground the container being poured from to the container or tank being poured into with a wire and alligator clips.

Do not attempt to paint the inside of a large tank from the inside unless wearing a self-contained breathing apparatus to avoid being overcome by fumes. Death could result.

Empty containers retain product residue. Observe all hazard precautions given in this data sheet.
Section 8 - Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Percent (w/w)</th>
<th>TWA(source)</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butanone</td>
<td>78-93-3</td>
<td>60 - 100%</td>
<td>20 ppm(1,2,3,4)</td>
<td>300 ppm(2,3,4)</td>
<td>-</td>
</tr>
<tr>
<td>1,2 Butylene Oxide</td>
<td>106-88-7</td>
<td>1 - 5%</td>
<td>No official limits established.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1)=OSHA  (2)=NIOSH  (3)=ACGIH  (4)=CANADA  TWA=8 hr Time Weighted Average  STEL=15 minute TWA Ceiling=Instantaneous

Ventilation: At least 10 air changes per hour for good general room ventilation are recommended. If the exposure limits of an ingredient will be exceeded, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the limits.

Respiratory Protection: None expected when used as directed. If the exposure limits of an ingredient will be exceeded wear a NIOSH approved respirator with an organic vapor cartridge or SCBA

Gloves: If the product will contact hands wear resistant gloves such as neoprene or Nitrile. Do not use disposable latex gloves. Nitrile disposable gloves are good.

Eye Protection: If splashing is possible wear safety glasses with side shields or chemical goggles.

Other Protective Equipment: None.

Section 9 - Physical and Chemical Properties

Boiling Point: 175°F.  
Specific Gravity: 0.8  
Percent Volatiles: 75%  
Solubility In Water: Negligible  
Appearance and Odor: A clear, blue, viscous liquid with a solvent odor.

Section 10 - Stability and Reactivity

Incompatibility: Oxidizers.

Hazardous Decomposition Products: CO₂, CO, HCl

Section 11 - Toxicological Information

2-Butanone LD₅₀ - 3.4 g/kg rat oral  
1,2 Butylene Oxide LD₅₀ - 1-2 g/kg rat oral  

Butylene oxide is not rated as a carcinogen by OSHS or NTP. IARC rates it in Group 2b, possibly carcinogenic, for the reasons stated below.

Butylene oxide has been shown to produce benign and malignant tumors in rats but not in mice. These tumors occurred only following high exposure levels. Butylene oxide is not believed to pose a carcinogenic risk to man. The small percentage of butylene oxide in Northern Fuel Tank Liner makes a high exposure level impossible.

In female rats exposed by inhalation to > 1000 ppm 2-Butanone (5X TLV), minor embryotoxic/fetotoxic effects were observed.

Section 12 - Ecological Information

Do not dispose of in the environment.

Section 13 - Disposal Considerations

Waste Disposal Method: wet material may be poured on ground far away from all sources of ignition and allowed to evaporate and dry. The dry plastic is non-hazardous and may be thrown in the trash. Avoid open burning of the plastic as it gives off dense black smoke. Wet material should be properly incinerated or disposed of in an approved landfill. Comply with all state, local and federal regulations.

Section 14 - Transport Information

D.O.T. Hazard Class: Quarts or smaller (except by air) - Consumer Commodity ORM-D. Gallons (and quarts by air) - PAINT, 3, UN 1263, P.G. II

Section 15 - Regulatory Information

The components of this product are on the TSCA inventory of chemical substances.

Section 313 Supplier Notification: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and CFR 372.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>C.A.S. No.</th>
<th>% (w/w)</th>
<th>Lbs./Gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYL ETHYL KETONE (2-Butanone)</td>
<td>78-93-3</td>
<td>67%</td>
<td>4.9</td>
</tr>
<tr>
<td>1,2 BUTYLENE OXIDE</td>
<td>106-88-7</td>
<td>2.7%</td>
<td>.184</td>
</tr>
</tbody>
</table>

Section 16 - Other Information

NFPA: H:1  F:2  I:0  HMIS® III: H:1  F:3  P:0  These ratings estimates are to be used only with a fully implemented training program in the workplace. NFPA® is a mark registered by the NFPA. HMIS® is a mark registered by the NPCA.

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